# Preparing for Pandemic Influenza

An Overview of the Manitoba Government's Pandemic Response

Manitoba

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## Planning and Preparing

The potential impact of a pandemic influenza on Manitoba could be significant and long-lasting. The provincial government is actively planning to deal with this potential threat. A pandemic will have far-reaching and potentially long-term impacts that will affect the entire community. Preparing and planning together is critical to ensure this threat is managed effectively. Manitoba's flexible plan has seven priorities:

1. **Healthy communities:** maintaining or increasing general health
2. **Surveillance:** gathering information
3. **Health services:** planning to care for Manitobans
4. **Vaccines and Anti-virals:** preparing treatments and responses
5. **Community planning:** working with municipalities, schools and businesses
6. **Essential provincial services:** maintaining important services
7. **Public communications:** providing, clear, useful and accurate information

The world is not experiencing a pandemic influenza right now. However, governments around the world are wisely preparing for one, including Manitoba.

Pandemic influenza is a potential threat to Manitoba and the rest of the world, so we can anticipate dealing with it at some point in the future. News and attention focused on avian influenza and occasionally on swine influenza, highlight the possibility that an influenza virus could turn into something our immune systems have never dealt with. The result could be significant disease and death around the world.

## Manitoba is Preparing

Planning and preparation for a pandemic emergency can help reduce the impact and help Manitobans deal with the situation. Manitoba has dealt with floods, forest fires and routinely deals with smaller outbreaks of diseases such as meningitis. The province has a proud track record of pulling together to successfully tackle many different challenges. Manitobans have learned from those challenges and used their experience to test and create effective plans that are continually evolving. This experience provides a valuable framework to deal with a pandemic influenza.

Manitoba is part of a national and international community that is preparing for such an outbreak. The fact that there is so much known about avian influenza is one indication that world-wide surveillance efforts are working and providing vital information about influenza. The provincial government is also working with regional health authorities (RHAs), municipal governments and others to plan and prepare Manitoba for a possible pandemic or other serious health threat.

## Manitoba's Plan

Manitoba is part of Canada's national pandemic plan and the government has adapted that framework in a plan specifically for the province, which can be found at www.gov.mb.ca/health/publichealth/cmoh/pandemic.

The plan is thorough, but flexible. Scientists are actively working on ways to manage a pandemic strain of influenza. However, a vacinne cannot be developed until an actual pandemic influenza strain surfaces. Then scientists can determine how it is affecting people and recommend the best way to deal with the new strain of disease. When a pandemic occurs, Manitoba's plan can be adjusted and adapted based on the best available scientific evidence.

At the same time, past pandemics do provide valuable information to help shape the plans that are in place. For example, scientific models based on past pandemics in 1918, 1957 and 1968 have already provided base information to guide planning.

One model indicates that during a pandemic influenza between 176,000 to 410,000 people could become ill in Manitoba causing 700 to 1,600 deaths. To ensure the province is adequately prepared, Manitoba is developing plans to prepare for 410,000 Manitobans becoming ill, and between 4,100 and 6,100 potential deaths.

However, experts believe there would be fewer deaths from a pandemic, because we're healthier and there are better drugs, antivirals and vaccines available in a more modern health system.

## Pandemic Influenza vs Annual Influenza

Influenza is highly infectious and can spread easily from person to person. Every year, minor changes occur in influenza viruses. Based on these changes, scientists develop annual vaccines that are effective against the current strains. Each year, at-risk Manitobans are encouraged to "Get the Shot, Not the Flu."

Pandemic influenza is different. It is the result of a major change (known as a shift) in an influenza virus that results in a completely new strain. Most people will not have any specific immunity to such a strain, consequently, large numbers of people can become infected as the disease spreads. There have been at least three pandemics in the past century.

You can find more information about influenza and Manitoba's pandemic plan at www.gov.mb.ca/health/publichealth/cmoh/pandemic.

## Manitoba's Planning Assumptions

When a pandemic influenza occurs, there will be illness in Manitoba and there will likely be deaths. It is not a question of "if," but a matter of "when." The exact timing, the severity of illness and who will be most affected are not known.

Manitoba's plan focuses on two main goals: preventing severe disease and death and minimizing social disruption caused by the pandemic. The plan is based on several key assumptions including:

- There will be two to four months lead time once a pandemic influenza begins in another part of the world. In fact, that lead time could be shorter, given current trends in world travel.
- Initially, there will be no vaccine for the particular strain of influenza causing the pandemic.

- Influenza spreads rapidly from person to person. People who become ill can spread the disease 24 hours before symptoms appear and for several days while they are ill.
- Some people may be infected and show no symptoms. Yet, they are still spreading the disease to others. This "asymptomatic" transmission is one reason influenza is hard to stop.
- The first wave of disease may last six to eight weeks. A second wave could follow within three to nine months and may be more severe. A vaccine may not be available for the first wave.
- Vaccination is considered the most effective way to protect against a pandemic influenza.
- Antivirals are drugs used for the prevention and early treatment of influenza, but do not provide immunity from the virus. It is not known how effective antivirals will be during a pandemic.
- Manitoba will be dealing with an outbreak of disease at potentially the same time as other parts of Canada and the United States. This means Manitoba may have to fully manage on its own because the support that traditionally comes from other jurisdictions won't be available.
- Manitobans and Canadians are generally healthier than they were during previous pandemics and medical science continues to make significant strides in effectively dealing with disease.
- Severe outbreaks of disease may result in quarantines, travel restrictions, limitations on public gatherings and cancellation of major public events, especially during the early days of a pandemic.
- The health care system could be overwhelmed with influenza patients. At the same time, health care workers will also get sick. Thirty to 50 per cent of the health care workforce could be ill at the peak of a pandemic wave. As a result, hospital care may not be available to some people who may need it.
- Manitobans will need to care for themselves and each other as much as possible while the health care system deals with the most severe cases.
- Most people who become ill from influenza will recover after resting at home for several days. Not everyone will require hospitalization.
- Business will be affected. The degree of impact will be determined by the severity of the disease. It is difficult to predict an exact number. However, it is possible that as much as 30 to 50 per cent of a workforce could be away sick or caring for someone else who is sick at the peak of a pandemic wave.

- The flow of goods and services will be affected, as will demand for many services. For example, the Internet and major media outlets will be sought-after information sources, while restaurants and movie theatres will have fewer customers.
- Accurate, timely, useful communications will be integral to Manitobans effectively dealing with a pandemic.

## Manitoba's Pandemic Priorities

While there is much that is unknown, planning is important to review the ability to respond and consider the challenges to an effective response. Manitoba's plan is flexible and reaches out to other partners in the province including municipalities, schools, businesses and other organizations.

The provincial government's seven pandemic priorities are:

1. **Healthy Communities:** maintaining or increasing the general health of individuals and communities to help avoid disease or reduce its impact

2. **Surveillance:** gathering and contributing to knowledge about influenza viruses and how they behave is critical to making good decisions and plans

3. **Health Services:** planning to respond to demand for health care in hospitals and in the community during a pandemic

4. **Vaccines and Anti-virals:** preparing for the best way to approach the use of vaccines and other treatments for Manitobans

5. **Community Planning:** working with municipalities, schools and businesses that will need to prepare and plan for a pandemic outbreak

6. **Essential Provincial Services:** developing plans to ensure provincial services such as employment and income security, child and family services, corrections and highways are maintained during a pandemic outbreak

7. **Public Communications:** providing clear, useful, accurate information to Manitobans about the nature of potential threats, how threats are being addressed and what Manitobans can do

## 1. Healthy Communities

Healthy communities are in a much stronger position to deal with any threat, including a pandemic. Being healthy will help Manitobans avoid diseases or minimize the potential impact of getting sick. Eating well, exercising regularly and practising good hygiene, such as regular hand-washing with soap and water, can help Manitobans reduce the impact of disease.

Preparing a home-emergency kit can help families prepare for many emergency situations including a pandemic. Some items to consider having in your kit include non-perishable and canned goods such as soups, bottled water, information about important prescriptions anyone in your family takes, basic first aid materials such as band-aids, a battery operated radio so you can hear instructions on what to do though media outlets and a phone that doesn't need electricity to work. You may want to have over-the-counter medications that reduce fevers and a simple painkiller. During a pandemic, instructions on the best way to care for yourself or others who are ill will be available through the media and the Internet. The kit should also include important papers, insurance information and key emergency contacts. You can find out more about preparing for emergencies before they occur at www.manitobaemo.ca.

Manitoba already has programs such as *In Motion* to encourage active living and health promotion programs such as childhood immunizations and the annual effort to "Get the Shot, Not the Flu." Manitoba is the first Canadian province to commit to a province-wide smoking ban to protect health. The province is also actively working with community partners to reach out to young people about the dangers of smoking.

The recently launched crystal meth strategy focuses on reducing demand and restricting supply for this highly addictive illegal drug. The province has also committed over $6 million in new funding to addictions and mental health treatments.

Quality of life improvements for people with disabilities have been supported through new funding for housing and a commitment to accessible designs for new homes and developments.

These commitments are examples of the efforts being made to support the well-being of Manitobans and their communities.

## 2. Surveillance

Manitoba is part of international and national monitoring/surveillance activities that gather information about active influenza viruses. The more scientists know about the virus, the better it will be for pandemic planning activities. Doctors, laboratories and local public health officials monitor disease activity across Manitoba. This, in turn, feeds into information gathered at a national and international level.

Animal health, particularly among certain birds and pigs, can affect human health. Pandemic influenzas are believed to usually begin in Asia where there may be closer contact between farm animals and people. In recognition of the link between human and animal health, Manitoba has established the Office of the Chief Veterinarian. This adds to the province's surveillance efforts and helps build the scientific information base that will contribute to effective pandemic decision-making.

## 3. Health Care Services

Manitoba Health, regional health authorities (RHAs), municipalities and other government departments are working together to determine how they will provide the best possible prevention advice and care during a pandemic influenza.

Public health officials will provide advice and direction to contain or control the spread of a pandemic. This could include school closures, restricting or limiting public gatherings, isolating sick individuals and issuing travel advisories if necessary. They are most likely to happen in the early stages of the pandemic.

The province has legislation to ensure quick and responsible action can be taken when there is a serious threat to the health of Manitobans. This includes the ability to order quarantines, conduct inspections, gather information or take other measures needed to prevent the spread of disease.

For more information, go to www.gov.mb.ca/health/publichealth/cmoh/pandemic.

## 4. Vaccines and Anti-virals

An effective, pandemic-specific vaccine is the most vital response to a pandemic influenza. However, it will take time, potentially three to six months after a pandemic begins to produce the vaccine.

For annual influenza vaccination programs, scientists generally know the types of virus that will most likely affect people in the next flu season.

This is not the case for a pandemic. A pandemic influenza is a new strain of the virus created by major changes (shifts) of the influenza A virus. It will take time to produce a vaccine to protect against a new strain.

Once a vaccine is developed, Canada will be one of the few countries in the world that will be able to produce the vaccine in a laboratory fast enough to immunize the entire population. Once a vaccine is created, the supply will become available in stages. Manitoba is working to strengthen its ability to deliver large-scale vaccinations safely and effectively.

While the vaccine is being produced, there will be influenza anti-virals available. Anti-virals may be able to prevent the onset of influenza symptoms and provide early treatment to reduce the length of illness and potentially serious complications. Anti-virals do not provide immunity. While scientists believe these drugs will help, they are also uncertain about their potential performance against a pandemic. Manitoba has stockpiled doses of anti-virals and may purchase more as part of a national plan.

Antibiotics will not affect a virus such as influenza. However, these treatments may be needed to help fight secondary bacterial infections such as pneumonia. There are also vaccines available to prevent influenza complications such as pneumococcal pneumonia. These vaccines are now widely available in Manitoba for those who are more likely to become seriously ill as a result of influenza.

## 5. Community Planning

A pandemic influenza will have a significant impact on individuals, families and communities. This potential impact is widespread and far-reaching. It is critical that the entire community not only respond to the situation, but prepare and plan together to ensure the response is co-ordinated and effective.

Health, municipal officials and others are planning:

- how to deal with people with minor illnesses
- potential approaches to closing or limiting public gatherings
- managing and responding to demand for emergency services
- maintaining important services such as water, garbage pick-up and other infrastructure

In addition to the health care system, businesses, municipalities and schools are some of the key organizations that will be affected by a pandemic influenza. The Manitoba government is working with all of these organizations to help develop plans and prepare responses.

### Municipalities

Provincial legislation requires that all municipalities have an up-to-date emergency plan. The local area is where a response to an emergency situation always begins. As part of Manitoba's pandemic planning, municipal emergency plans will be reviewed in consultation with the province and regional health authorities (RHAs) to ensure they include information specific to a pandemic response. The Manitoba government has provided all municipalities with a planning guide to help their pandemic planning efforts. This document is available at www.gov.mb.ca/health/odm/pandemic.

### Schools

Schools can be a source for the rapid spread of influenza among children, and eventually into the community. During a pandemic, there is the possibility that schools and child care centres will be closed to slow down the spread of disease. This will affect parents who may need to be at home, instead of work, to care for children.

In addition, schools may need to create websites or take-home packages of classroom work to help children continue learning during an extended absence from school. The province is currently developing a pandemic planning guide for schools, post-secondary institutions and child care facilities that will include these types of suggestions and guidelines.

### Business Planning

Significant illness caused by a pandemic will result in economic impacts. The SARS outbreak in Toronto illustrates potential reactions to a disease outbreak by customers, visitors and local citizens.

Businesses will need to have a business continuity plan that outlines as many contingencies as possible. The Manitoba government is working with the business community to develop a planning document to help them prepare.

## 6. Maintaining Essential Provincial Services

All provincial government departments and Crown corporations will be required to develop business continuity plans to provide essential services to the public during a pandemic outbreak. This would include services such as:

- energy and utilities, including hydro, natural gas and transmission systems
- highways and transportation
- food and water supplies
- safety and security – police, child protection services, search and rescue, and hazardous materials
- information – birth and death certificates, driver and vehicle licensing
- services such as income assistance, child and family services, corrections and courts

## 7. Public Communications

Manitobans need accurate, useful, clear information when an urgent or emergency situation is unfolding. The provincial government will provide ongoing information to keep Manitobans informed about the potential pandemic threat, what actions are being taken to address the threat and what role individual Manitobans can play.

The province has a strong track record of providing timely and accurate information for issues such as meningitis, West Nile virus, flooding threats, fire situations and other hazards. During a pandemic influenza, this communications commitment will continue.

## Pandemic Planning Will Continue

Provincial efforts to prepare for a pandemic are continuous and evolving. Medical science is learning more about influenza viruses and how they may mutate; how vaccines will work and how a pandemic influenza may begin and provincial plans will need to be adapted and changed. Once a pandemic begins to spread, the province's plans will be adapted to the specific nature of the outbreak.

The Manitoba government will continue to work with municipalities, regional health authorities, businesses and national and international partners to ensure the best possible plans are in place to deal with a pandemic.

The province will also continue to communicate with Manitobans about pandemic influenza to ensure the public is informed about the potential for a disease outbreak and about the ongoing plans and preparations within government and local communities.

## Conclusion

No nation or region will be unaffected by a pandemic influenza, including Manitoba. Developing a plan has been vital. Our plan will help us make sure we can deal with the potentially severe effects of a pandemic. Information and knowledge about pandemic influenza will continue to grow and evolve, as will Manitoba's efforts to plan and prepare for an effective response. On a local, national and international scale, pandemic planning is underway. The recent focus on avian influenza and concerns over the potential spread and shift in that virus have highlighted the importance of planning, preparing and learning about the potential of a pandemic influenza. It has become a global effort.

The following websites have interesting additional information and are updated frequently:

Province of Manitoba:
**www.gov.mb.ca/health/publichealth/cmoh/pandemic.html**
**www.manitobaemo.ca**

Public Health Agency of Canada:
**www.phac-aspc.gc.ca/cpip-pclcpi/**

World Health Organization – 10 things to know about pandemic influenza:
**www.who.int/csr/disease/influenza/pandemic10things/en/index.html**